Weekly reports are to be emailed to atbecker@uh.edu by 5:00pm on Tuesdays. The purpose of a weekly report is to: (1) give you text and images for your papers, thesis, and dissertation, (2) document progress, (3) identify if you are stuck or need resources.

Weekly report

1. **My *Goals* from last week**

* Order the machining of the G10 parts
* Finish to generate the 2D drawings
* Order material to build the magnetic system

1. **My *Accomplishments* this week**

* I have the formal quote for the G10 machining, I will place the order soon
* I have ordered material for the new magnetic system
* I am working on the sphere positioning using Hall sensors: The hardware is working and a basic program to measure the field and compute the position was made. It works but it is not accurate because the sphere has 3 degrees of freedom (two rotations and one translation). In the theory I made, the magnetization was always oriented along the z axis (one degree of freedom). The optimization does not work with 3 degrees of freedom. The position is calculated by taking the average position between the probe that gives the maximum field and the probe that gives the minimum field.
* The positioning system was modeled in 3d with matlab to take into account the random orientation of the sphere magnet.

1. **My *Goals* for next week**

* Add the coils on the positioning system and implement the calibration.
* Move the sphere with the electromagnets while tracking the position.
* Order material.

1. **What I need Dr. Becker to do:**

Have good vacations!